UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,143	01/14/2002	Gang Huang	HUANG 14-13-7	6844

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EXAMINER
REILLY, SEAN M

ART UNIT	PAPER NUMBER
2153	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/043,143	HUANG ET AL.
	Examiner	Art Unit	
	Sean Reilly	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 December 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This Office action is in response to Applicant's amendment and request for

reconsideration filed on December 14, 2005. Claims 1-24 are presented for further examination.

Independent claims 1, 9, and 17 have been amended.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. **Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with**

the enablement requirement. The claim(s) contains subject matter which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention. Specifically the

specification fails to disclose *how a calibration value is determined.* Stating that the processor

analyzes noise, propagation delay, and bit rate error values to produce a calibration value (for

example see pg 5 lines 12-17 or pg 8 lines 18-22) fails to enable one skilled in the art how to

determine a calibration value.

Applicant asserts in the previous arguments filed April 27, 2005, that the specification pg

4, line 10 – pg 5, line 10 discloses how a calibration value is determined. As stated in the

previous office action, that portion of the specification fails to even mention the term "calibration

value." In Applicant's latest arguments filed November 11, 2005 pg 1, Applicant now asserts

that pg 5, lines 18-23 "sufficiently disclosed how the recited calibration value is determined from

the recited test signal." Examiner respectfully disagrees. Applicant still has failed to provide

any support for how a calibration value is determined. There is simply no disclosure in the

specification that would enable one of skill in the art to make the leap of logic **from** noise

measurement, propagation delay, and bit rate error values (which are measured from test signals)

TO a determined calibration value.

The specification as a whole failed to disclose how a calibration value **relates** to a

propagation delay value, bit rate error value, and noise measurement value. In the only sections

of the specification where a calibration value is determined, a processor **analyzes** noise,

propagation delay, and bit rate error values to magically produce a calibration value (pg 5 lines

12-17 and pg 8 lines 18-22). In clearer terms Applicant's discourse amounts to nothing more

than 1) a black box receives some data (e.g. noise, propagation delay, and bit rate error values),

2) the black box performs some unknown *analysis* using the data, and 3) the black box produces

a calibration value.

Thus, Applicant clearly failed to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the claimed invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-4, 6, 9, 11-12, 14, 17, 19-20, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Schober et al. (U.S. Patent Number 6,493,320; hereinafter Schober).

3. Regarding claims 1 and 9, Schober discloses a self calibrating network comprising: a first node (for example Figure 1, Routers 105a or 105b between link 110a) to transmit a test signal (any packet sent while tuning; e.g. a test pattern); and a second node (for example Figure 1, Routers 105a or 105b) to receive said test signal and to determine (Figure 7, Component 600) a calibration value (frequency, power level) for said second node to optimize the transfer of data between said first node to said second node (reliable transfer at the fastest possible speed and lowest possible power level, Col 2 lines 32-42), said calibration value being determined from at least one of available criteria comprising a noise measurement value, a propagation delay value (Col 2, line 54 or lines 57-59 or lines 66-67), and a bit rate error value.

4. Regarding claim 3, Schober discloses said calibration data packet contains a node identification (chip id and port number) associated with said first node (transferred during master slave configuration for tuning, Col 7, lines 50-55).

5. Regarding claim 4, Schober discloses said second node repeatedly accepts copies of said calibration data packet from said first node until the transfer of data from said first node to said second node is optimized (multiple packets transmitted for each component to be tuned during tuning algorithm 600, for instance Link Exercise 714, Col 16, lines 16-37).

6. Regarding claim 6, Schober discloses said first node repeatedly transmits a calibration data packet until said second node acknowledges an optimal calibration value has been determined (multiple packets transmitted for each component to be tuned during tuning algorithm 600, for instance Link Exercise 714, Col 16, lines 16-37).

7.   Regarding claims 9, 11-12, 14, 17, 19-20, and 22, the limitations of claim groups 9, 11-12,

14, and 17, 19-20, 22 are similarly drawn to the limitations of claims 1, 3-4, and 6, respectfully.

Thus, a similar rationale is used for rejecting the claims with the exemplarily tuning system of

figure 2a or 2b providing the *means for* executing the functionality mapped in claims 1-6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   **Claims 2, 5, 10, 13, 18, and 21 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Schober et al. (U.S. Patent Number 6,493,320; hereinafter Schober) and

the knowledge of one of ordinary skill in the art at the time of invention.

9.   Regarding claims 2, 5, 10, 13, 18, and 21, Schober discloses said second node stores said

calibration value in a memory, each link connected to a router has its own tuning system, e.g.

tuning system 200b of router 105b for link 110a, which stores the optimized configuration for

transferring data on that *link* after the tuning algorithm of figure 7 has successfully completed.

While Schober discloses storing the calibration value in memory Schober fails to disclose storing

the calibration value in a specific *calibration* memory however, the Examiner takes official

notice that it was well known in the art at the time of the invention to centrally store data in

memory with a corresponding identification. It would have been obvious to one of ordinary skill

in the art at the time of the invention to store the calibration values for each tuning system within

a router at a single memory location with an associated node identification (such as a chip id and

port number, Col 7, lines 50-55), in order to have a central location for maintaining all

calibration values used within a given router.

Allowable Subject Matter

10. Claims 7-8,15-16, and 23-24 overcome the prior art of record however they are not objected

to due to the outstanding 112 1st ¶ rejection.

Response to Arguments

11. In response to Applicant's request for reconsideration filed on December 14, 2005, the

following factual arguments are noted:

> a. Schober failed to determine a calibration value from a noise measurement value, a
>
>   propagation delay value **or** a bit rate error value.

In considering (a), Examiner respectfully disagrees with Applicant's argument. Note that

Applicant's claims merely require **one** of a noise measurement value, a propagation delay value

or a bit rate error value. Examiner maintains that at the very least Schober calculates a

calibration value (i.e. speed, power level combination) (Col 2, lines 32-35), based on a

propagation delay value (i.e. transmission speed of the a signal across the link OR the relative

delay between individual data line in the link OR comparing the timing of signal transition with know reference timing signals) (Col 2, line 54 or lines 57-59 or lines 66-67).

Conclusion

12.   The prior art made of record, in PTO-892 form, and not relied upon is considered pertinent to applicant's disclosure.

13.   This office action is made **NON-FINAL.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Reilly whose telephone number is 571-272-4228.   The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 24, 2006

KRISNA LIM
PRIMARY EXAMINER